

Relevance of Fluid Physics

- **Fluid flows are ubiquitous in scientific and technological systems in both ground-based and space-based systems**
- **The motivations for fluid physics studies in microgravity are:**
 - **Scientific knowledge: Microgravity provides a much needed simplification to probe into fundamental laws of nature (nearly impossible in a 1-g environment)**
 - **Space Power Generation and Spacecraft Thermal Management: An understanding of fluid physics in low gravity essential for human-assisted exploration of deep space and study of Earth's ecosystems utilizing space**
 - **Practical Benefit: Microgravity experiments provide unique insight into behavior of multiphase flows, boiling, condensation, colloid physics, and surface tension controlled flows (for design of next generation of products and processes)**